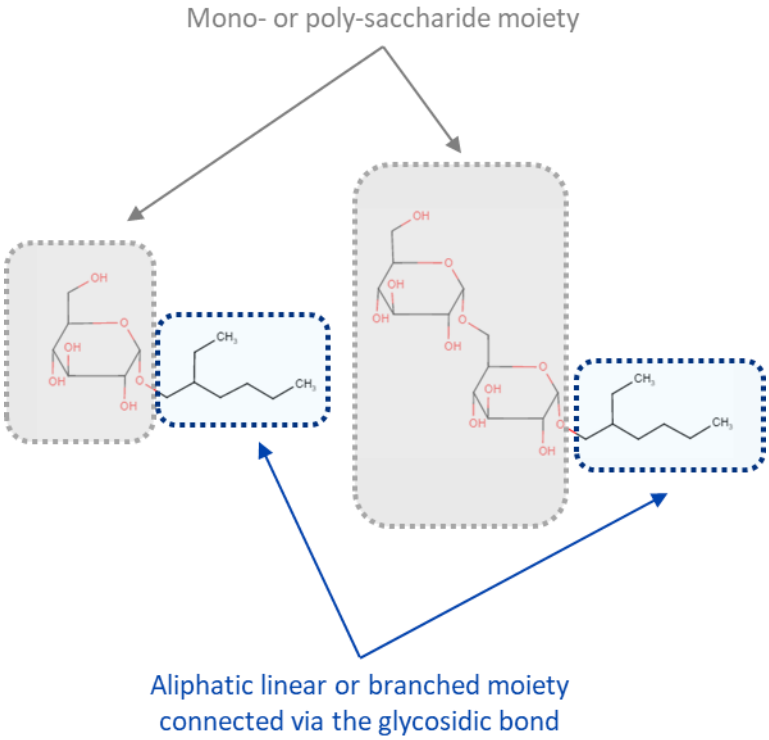
Assessment of regulatory needs

Authority: European Chemicals Agency (ECHA)

Group Name: Glycosides

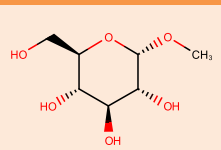
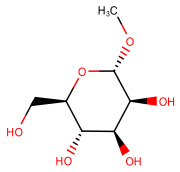
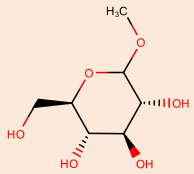
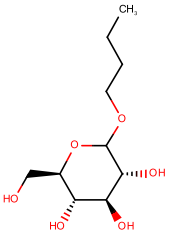
General structure:



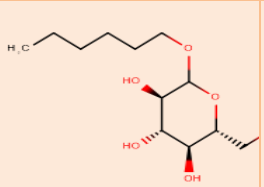
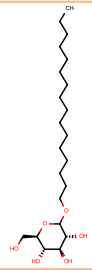
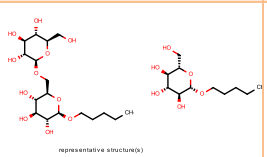
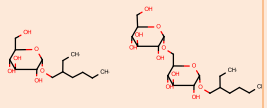
Revision history

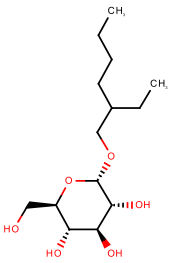
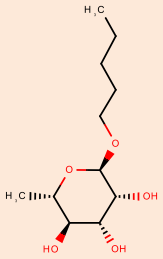
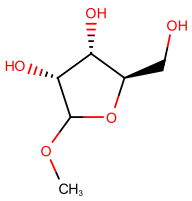
Version	*Date*	*Description*
1.0	10 November 2023	

Substances within this group:

EC/List number	CAS number	Substance name [and/ or Substance name acronyms]	Chemical structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
202-571-3	97-30-3	Methyl α-D-glucoside		Full, 100-1000
210-502-3	617-04-9	Methyl α-D-mannopyranoside		Full, 10-100
221-581-9	3149-68-6	Methyl D-glucopyranoside		OSII or TII
248-685-7	27836-64-2	Dodecyl D-glucoside		C&L notification
248-686-2	27836-65-3	Octadecyl D-glucoside		C&L notification
250-608-7	31387-97-0	Butyl D-glucoside		C&L notification

[1] Note that the total aggregated tonnage band may be available on ECHA's webpage at https://echa.europa.eu/information-on-chemicals/registered-substances

259-217-6	54549-24-5	Hexyl D-glucoside		Full, >1000
259-220-2	54549-27-8	Hexadecyl D-glucoside		C&L notification
308-766-0	98283-67-1	Undecyl glucoside		Full, not (publicly) available
309-363-2	100231-63-8	Pentyl D-glucoside		Full, not (publicly) available
414-420-0	-	A mixture of: 2-ethylhexyl mono-D-glucopyranoside; 2-ethylhexyl di-D-glucopyranoside		Full, not (publicly) available
431-650-7	-	MONTANOV WO 18 P		Not registered
444-850-4	1235390-87-0	D-Xylopyranose, oligomeric, 3-methylbutyl glycosides		Full, not (publicly) available
453-180-1	1235552-58-5	D-Xylopyranose, oligomeric, C16-18-alkyl glycosides		Full, not (publicly) available
464-320-6	423772-95-6	D-Xylopyranose, oligomeric, 2-octyldodecyl xylosides		Full, not (publicly) available
483-960-7	-	D-pentose and D-glucose, oligomeric, C8 and C10 alkyl glycosides		Full, not (publicly) available
483-990-0	-	D-pentose and D-glucose, oligomeric, C12 and C14 alkyl glycosides		Full, not (publicly) available
484-370-2	1235390-87-0	[No public or meaningful name is available]		NONS
484-380-7	-	Reaction mass of 1-octadecanol and octadecyl alpha,beta D-xyloside and 1-hexadecanol and hexadecyl alpha,beta		NONS

		D-xyloside		
484-390-1	-	Reaction mass of D-Xylopyranose, oligomeric, C8-10-alkyl glycosides and D-Glucopyranose, oligomeric, C8-10-alkyl glycosides		NONS
484-400-4	-	[No public or meaningful name is available]		NONS
500-220-1	68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides		Full, >1000
500-394-9	157707-87-4	D-Glucopyranose, oligomers, branched and linear C9-11-alkyl glycosides		Full, 100-1000
500-395-4	157707-88-5	D-Glucopyranose, oligomers, C12-14-alkyl glycosides		OSII or TII
600-975-8	110615-47-9	D-Glucopyranose, oligomeric, C10-16(even numbered) alkyl glycosides		Full, >1000
603-082-1	125590-73-0	.alpha.-D-Glucopyranoside, 2-ethylhexyl		C&L notification
700-713-3	83161-22-2	Pentyl 6-deoxy-alpha-L-mannopyranoside		Full, not (publicly) available
700-891-2	-	Acetalization product between glucose and 12-hydroxystearyl alcohol		Full, not (publicly) available
807-654-3	1627851-18-6	D-Glucopyranose, oligomeric, heptyl glycosides		Full, not (publicly) available
857-672-0	13039-63-9	(2R,3S,4R)-2-(Hydroxymethyl)-5-methoxytetrahydrofuran-3,4-diol		OSII or TII
921-820-3	-	Distilled acetalization product between glucose and C12, C14, C18, C20, C22 alcohol		Full, not (publicly) available
922-178-7	-	Distilled acetalization product between glucose and C12-18(even		Full, not (publicly) available

		numbered)alcohol		
923-418-3	-	Acetalization product between glucose and C14 alcohol		Full, not (publicly) available
923-835-0	-	Acetalization products between glucose and C20/22 alcohol		Full, not (publicly) available
923-908-7	1187204-08-5	Alcohols, C12-18, reaction products with D-glucose		Full, not (publicly) available
927-870-2	-	Acetalization products between glucose and C16/18 alcohol		Full, not (publicly) available
939-266-6	1179883-13-6	Alcohols, C16-18, reaction products with D-glucose		Full, not (publicly) available
939-389-5	-	D-Glucopyranose, oligomeric, butyl glycoside		Full, not (publicly) available
939-698-5	-	Reaction products of D-Glucose, n-Butanol and C10-12 (even numbered) alcohols		Full, not (publicly) available
940-643-2	-	D-pentose, oligomeric, C14 and C18 alkyl glycosides		Full, not (publicly) available
940-644-8	-	D-pentose, oligomeric, C10 and C12 alkyl glycosides		Full, not (publicly) available
947-427-7	-	D-Glucose, reaction products with alcohols C16-18 (even numbered)		Full, not (publicly) available

This table contains also group members that are only notified under the CLP Regulation. However, the list is not necessarily exhaustive. Should further regulatory risk management action on one or more substances in the group be considered, ECHA may make an additional search for related C&L notified substances to be included in the group and develop an assessment of regulatory needs for them.

Contents

DISCLAIMER

The author does not accept any liability with regard to the use that may be made of the information contained in this document. Usage of the information remains under the sole responsibility of the user. Statements made or information contained in the document are without prejudice to any further regulatory work that ECHA, the Member States or other regulatory agencies may initiate at a later stage. Assessment of regulatory needs and their conclusions are compiled on the basis of available information and may change in light of newly available information or further assessment.

Foreword

The assessment of regulatory needs of a group of substances is an iterative, informal process to help authorities consider the most appropriate way to address an identified concern for a group of substances or a single substance and decide whether further regulatory risk management activities are necessary.

The grouping is mainly based on structural similarity and associations made by the registrants between substances through read-across and category approaches as well as category associations from external sources (e.g. OECD categories)[2]. These methods are different from grouping as defined in Section 1.5 of Annex XI to REACH because the scope and intended use of ECHA's grouping is different. Thus, in this context, grouping does not aim to validate read-across and category approaches according to the Annex XI requirements but rather to support a faster and more consistent approach for regulating chemicals and avoid regrettable substitution.

The focus of the assessment is largely based on information available in the registration dossiers and on properties requiring regulatory risk management action at EU level[3]. The information reported on uses is from the registration dossiers (IUCLID) and is used as a proxy for assessing how widespread uses are and whether potential for exposure to humans and releases to the environment can be expected. The chemical safety reports are not necessarily consulted and no quantitative exposure assessment is performed at this stage.

The outcome of these assessments are proposals for immediate (the first action) and subsequent regulatory action(s), including the foreseen ultimate regulatory action (last foreseen regulatory action) to address the identified concern(s) in case the potential hazards are confirmed. For example, further data generation through compliance check is suggested as a first action, to confirm the identified hazard.

Where hazards are confirmed, regulatory risk management actions could be considered for the whole group, for a subgroup or for individual substances within the group. The robustness of the group depends on the stage of assessment and the level of certainty this stage requires. For example, the needs for grouping under restriction may differ from the needs for grouping for the purpose of harmonised classification. Group membership is reconsidered accordingly throughout the iterative assessment of regulatory needs, for example, after further information is generated and the hazard has been clarified or when new insights on uses and risks are available.

The assessment of regulatory needs in itself does not represent a regulatory action, but rather a preparatory step to consider further possible regulatory actions at the level of individual substances or groups/subgroups of substances.

[2] Working with Groups - ECHA (europa.eu)

[3] Regarding hazard properties the focus is for instance on CMR (carcinogenic, mutagenic and/or toxic to reproduction), sensitiser, ED (endocrine disruptor), PBT/vPvB or equivalent (e.g. substances being persistent, mobile and toxic), aquatic toxicity hazard endpoints and therefore only those are reflected in the report. This does not mean that the substances do not have other known or potential hazards. In some specific cases, ECHA may consider additional hazards (e.g. neurotoxicity, STOT RE).

Publication of ARNs makes it easier for companies to follow the latest status of their substances of interest, anticipate potential regulatory actions and make strategic choices in their chemicals portfolio.

For more information on assessments of regulatory needs please consult ECHA's website[4].

[4] https://echa.europa.eu/understanding-assessment-regulatory-needs

Glossary

ARN	Assessment of Regulatory Needs
CCH	Compliance Check
CLH	Harmonised classification and labelling
CMR	Carcinogenic, mutagenic and/or toxic to reproduction
DEv	Dossier evaluation
ED	Endocrine disruptor
NONS	Notified new substances
OEL	Occupational exposure limit
OSII or TII	On-site isolated intermediate or transported isolated intermediate
PBT/vPvB	Persistent, bioaccumulative and toxic / very persistent and very bioaccumulative
PMT/vPvM	Persistent, mobile, and toxic / very persistent and very mobile
RDT	Repeated dose toxicity
RMOA	Regulatory management options analysis
RRM	Regulatory risk management
SEv	Substance evaluation
STOT RE	Specific target organ toxicity, repeated exposure
SVHC	Substance of very high concern
TPE	Testing proposal evaluation

1 Overview of the group

Explanations on the scope of this assessment is available in the foreword to this document. Please read it carefully before going through the report.

ECHA has grouped together 42 substances that are glycosides and contain one (or more) sugar moiety(ies) linked to an alkyl chain (with a variability from C1 to C22) via the glycosidic bond. The group includes well-defined as well as UVCB substances. The sugar moieties are for example glucose, pentose and xylose, and a combination of them. The alkyl chain may be linear or branched. Some specific substances have also additional functional groups in the structure.

The status of the 42 substances is as such:

- **29** substances with full registrations
- **3** substances with intermediate registrations
- **5** NONs
- **5** not registered substances

Based on information reported in the REACH registration dossiers, the majority of the substances in the group are used as cosmetics, washing and cleaning products and in surface treatment products. For the substances with an Article 10 (full) registration, uses across a wide range of process categories are described, and 26 of these describe professional and consumer users in addition to industrial use (i.e., "widespread" uses where the potential for release/exposure is high).

2 Conclusions and proposed actions

The conclusions and actions proposed in the table below are based mainly on the REACH and CLP information available at the time of the assessment by ECHA. The conclusions are preliminary suggestions from a screening-level assessment done by ECHA with the aim to propose the next steps for further work (e.g., strengthening of the hazard conclusions, clarification of the uses and/or potential for exposure). The main source of information is the registration dossiers. Relevant public assessments may also be considered. When new information (e.g., on hazards through evaluation processes, or on uses) will become available, the document may be updated, and conclusions and actions revisited.

Table 1: Conclusions and proposed actions

EC/List number	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
202-571-3, 210-502-3, 221-581-9, 248-685-7, 248-686-2, 250-608-7, 259-217-6, 259-220-2, 308-766-0, 309-363-2, 414-420-0, 431-650-7, 444-850-4, 453-180-1, 464-320-6, 483-960-7, 483-990-0, 484-370-2, 484-380-7, 484-390-1, 484-400-4, 500-220-1, 500-394-9, 500-395-4, 600-975-8, 603-082-1, 700-713-3, 700-891-2, 807-654-3, 857-672-0, 921-820-3, 922-178-7, 923-418-3, 923-835-0, 923-908-7, 927-870-2, 939-266-6, 939-389-5,	No hazard or unlikely hazard	Inconclusive hazard for aquatic toxicity	Used across a wide variety of applications for industrial, professional and consumer uses where the potential for release/exposure is high.	**First step:** CCHs **Potential next steps (if low hazard confirmed):** No action **Currently no need for EU RRM** <u>Justification:</u> The available data indicates no or unlikely hazards for human health and the environment with the exception of aquatic toxicity (inconclusive). CCH is proposed for a number of substances to confirm low hazard. Harmonised/self-classification (will) require company level risk

EC/List number	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
939-698-5, 940-643-2, 940-644-8, 947-427-7				management measures (RMM) for environment to be in place.

3 Justification for the no need for regulatory risk management action at EU level

Based on currently available information, there is no need for (further) EU regulatory risk management for all substances in the group.

All substances in the group are unlikely to have the following human health hazard[s]: C/M/R, ED, and skin sensitisation.

For skin sensitisation, negative experimental skin sensitisation tests (either OECD 406 or 429) are available for most of the registered substances, showing negative results. For target organ toxicity, reproductive toxicity and ED, these conclusions are based on experimental studies (i.e., two sub-acute and two sub-chronic studies, several reproduction/developmental toxicity screening tests, two prenatal developmental toxicity studies and one two-generation study) reporting no relevant adverse effects with a NOAEL >= 1000 mg/Kg bw/d. For mutagenicity experimental studies are available for twelve of the registered substances, all with negative results. The conclusion on carcinogenicity is based on the absence of genotoxicity and the limited evidence from repeated dose studies.

Overall, these conclusions are based on studies conducted on a limited number of substances in the group. The conclusions are extrapolated to the members of the group with no or limited information based on the chemical structure similarity and a similar toxicological profile.

Degradation studies are available for most of the substances in the group. Available data show a high degree of biodegradation for all the substances in the group; therefore the group members are not or unlikely persistent in the aquatic environment. Consequently, PBT/vPvB and PMT/vPvM hazards are no/unlikely.
Based on Human health ED's conclusion of unlikely, the same conclusion is extrapolated with uncertainty to ENV ED for all substances in the group.

Based on currently available information, data on aquatic toxicity hazard are not sufficient to draw a conclusion for most substances in the group. Compliance checks are suggested to clarify the aquatic toxicity.

The majority of the substances are used across a wide variety of applications for industrial, professional and consumer uses where the potential for release/exposure is high.

Data generation is proposed to confirm/clarify low toxicity. It is expected that following data generation for aquatic toxicity registrants would adequately self-classify the substances. The self-classification will require company level risk management measures (RMM) for environment to be in place. Therefore, it is proposed that there is currently no need for EU-wide regulatory risk management.

Annex 1: Overview of classifications

Data extracted on 18/04/2023

EC/ List No	CAS number	Substance name	Harmonised classification
202-571-3	97-30-3	methyl α-D-glucoside	-
210-502-3	617-04-9	methyl α-D-mannopyranoside	-
221-581-9	3149-68-6	methyl D-glucopyranoside	-
248-685-7	27836-64-2	dodecyl D-glucoside	-
248-686-2	27836-65-3	octadecyl D-glucoside	-
250-608-7	31387-97-0	butyl D-glucoside	-
259-217-6	54549-24-5	hexyl D-glucoside	-
259-220-2	54549-27-8	hexadecyl D-glucoside	-
308-766-0	98283-67-1	undecyl glucoside	-
309-363-2	100231-63-8	pentyl D-glucoside	-
414-420-0	-	A mixture of: 2-ethylhexyl mono-D-glucopyranoside; 2-ethylhexyl di-D-glucopyranoside	-
444-850-4	1235390-87-0	444-850-4	-
453-180-1	1235552-58-5	453-180-1	-
464-320-6	423772-95-6	464-320-6	-
483-960-7	-	483-960-7	-
483-990-0	-	483-990-0	-
500-220-1	68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides	-
500-394-9	157707-87-4	D-Glucopyranose, oligomers, branched and linear C9-11-alkyl glycosides	-
500-395-4	157707-88-5	D-Glucopyranose, oligomers, C12-14-alkyl glycosides	-
600-975-8	110615-47-9	Reaction products of D-Glucose and C10-C16 (even numbered) alcohols	-
603-082-1	125590-73-0	603-082-1	-
700-713-3	83161-22-2	pentyl 6-deoxy-alpha-L-mannopyranoside	-
700-891-2	-	Reaction products of D-glucose and octadecane-1,12-diol	-
807-654-3	1627851-18-6	807-654-3	-
857-672-0	13039-63-9	methyl D-ribofuranoside	-
921-820-3	-	distilled acetalization products between glucose and C12/22 alcohol	-
922-178-7	-	distilled acetalization products between glucose and C12/18 alcohol	-
923-418-3	-	acetalization products between glucose and C14 alcohol	-

923-835-0	-	acetalization products between glucose and C20/22 alcohol	-
923-908-7	-	acetalization products between glucose and C12/18 alcohol	-
927-870-2	-	acetalization products between glucose and C16/18 alcohol	-
939-266-6	-	D-Glucose, reaction products with alcohols C16-18 (even numbered) (excess)	-
939-389-5	-	D-Glucopyranose, oligomeric, butyl glycoside	-
939-698-5	-	Reaction products of D-Glucose, n-Butanol and C10-12 (even numbered) alcohols	-
940-643-2	-	Reaction mass of D-xylofuranose oligomeric octodecyl glycosides (degree of polymerisation = 1) and D-xylofuranose oligomeric octodecyl glycosides (degree of polymerisation = 2) and D-xylofuranose oligomeric tetradecyl glycosides (degree of polymerisation = 1) and D-xylofuranose oligomeric tetradecyl glycosides (degree of polymerisation = 2) and tetradecanol and octadecan-1-ol	-
940-644-8	-	Reaction mass of D-xylofuranose oligomeric decyl glycosides, degree of polymerisation 1 and D-xylofuranose oligomeric decyl glycosides, degree of polymerisation 2 and D-xylofuranose oligomeric dodecyl glycosides (degree of polymerisation = 1) and D-xylofuranose oligomeric dodecyl glycosides (degree of polymerisation = 2)	-
947-427-7	-	D-Glucose, reaction products with alcohols C16-18 (even numbered)	-

(*) the number in brackets indicates the number of notifications received. Each notification can represent a group of notifiers, therefore the number may differ from the C&L inventory which displays number of notifiers.

Annex 2: Overview of uses based on information available in registration dossiers

Data extracted on 18/04/2023

MAIN TYPES OF APPLICATIONS STRUCTURED BY PRODUCT OR ARTICLE TYPES	202-571-3	210-502-3	221-581-9	259-217-6	308-766-0	309-363-2	414-420-0	444-850-4	453-180-1	464-320-6	483-960-7	483-990-0	500-220-1	500-394-9	500-395-4
PC 20: PRODUCTS SUCH AS PH-REGULATORS, FLOCCULANTS, PRECIPITANTS, NEUTRALISATION AGENTS	I, **P**	I, **P**													
PC 36: WATER SOFTENERS													**C**	**C**	
PC 37: WATER TREATMENT CHEMICALS				I									F, I	I	
PC 2: ADSORBENTS					**P**									F	
PC 11: EXPLOSIVES													**P**		
PC 12: FERTILISERS					F, I, **P**, **C**			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	**C**	
PC 27: PLANT PROTECTION PRODUCTS					F, I, **P**, **C**			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	**P**, **C**	
PC 4: ANTI-FREEZE AND DE-ICING PRODUCTS					**P**								I, **P**, **C**		
PC 35: WASHING AND CLEANING PRODUCTS				F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I **C**,	F, I, **C**	
PC 8: BIOCIDAL PRODUCTS (E.G. DISINFECTANTS, PEST CONTROL)						F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	I, **P**, **C**	
PC 28: PERFUMES, FRAGRANCES				F									F, **P**, **C**	**C**	
PC 3: AIR CARE PRODUCTS				F, I, **P**, **C**	**P**	F, **C**		F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	**C**	

PC 39: COSMETICS, PERSONAL CARE PRODUCTS	F, **C**			F, **P**				F, I, **P**, **C**	F, I, **P**, **C**	F, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	F, **P**, **C**	
PC 29: PHARMACEUTICALS		F		I, **P**									I, **P**	I, **P**	
PC 31: POLISHES AND WAX BLENDS				F, I, **P**, **C**	F, I, **P**, **C**	F, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	**P**, **C**	
PC 15: NON-METAL-SURFACE TREATMENT PRODUCTS					F, I, **P**			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I		
PC 24: LUBRICANTS, GREASES, RELEASE PRODUCTS					F, I			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	I	
PC 25: METAL WORKING FLUIDS				I	F, I, **P**								I, **P**	I	
PC 16: HEAT TRANSFER FLUIDS															
PC 17: HYDRAULIC FLUIDS													I, **P**, **C**		
PC 13: FUELS					F, I, **P**			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**		
PC 32: POLYMER PREPARATIONS AND COMPOUNDS													F, I, **P**	I	
PC 1: ADHESIVES, SEALANTS					**P**		**C**	F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**		
PC 9C: FINGER PAINT					**P**			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	**C**	
PC 9B: FILLERS, PUTTIES, PLASTERS, MODELLING CLAY					**P**			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	I, **C**	
PC 9A: COATINGS AND PAINTS, THINNERS, PAINT REMOVES				F	**P**		**C**	F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	I, **C**	
PC 18: INK AND TONERS					F, I, **P**		**C**						F, I, **P**, **C**	I	
PC 26: PAPER AND BOARD TREATMENT PRODUCTS					F, I, **P**			F, I, **P**, **C**	F, I, **P**, **C**		F, I, **P**, **C**	F, I, **P**, **C**	F, I		
PC 34: TEXTILE DYES, AND IMPREGNATING PRODUCTS					F, I, **P**										
PC 23: LEATHER TREATMENT PRODUCTS					F, I, **P**								**P**, **C**	**P**, **C**	

PC 14: METAL SURFACE TREATMENT PRODUCTS				I	F, I, **P**	I							I, **A**	I	
PC 21: LABORATORY CHEMICALS	F, I, **P**	F, I, **P**		I, **P**			**P**						F, I, **P**	F, I, **P**	
PC 19: INTERMEDIATE	I												F, I		I
PC 40: EXTRACTION AGENTS					F		I, **C**								
PC41: OIL AND GAS EXPLORATION OR PRODUCTION PRODUCTS					I		**C**								
PC42: ELECTROLYTES FOR BATTERIES															

F: formulation, I: industrial use, P: professional use, C: consumer use, A: article service life; P, C and A are highlighted in red to indicate widespread use with potential for exposure/release

MAIN TYPES OF APPLICATIONS STRUCTURED BY PRODUCT OR ARTICLE TYPES	600-975-8	700-713-3	700-891-2	807-654-3	857-672-0	921-820-3	922-178-7	923-418-3	923-835-0	923-908-7	927-870-2	939-266-6	939-389-5	939-698-5	940-643-2
PC 20: PRODUCTS SUCH AS PH-REGULATORS, FLOCCULANTS, PRECIPITANTS, NEUTRALISATION AGENTS														F, I, **P**	
PC 36: WATER SOFTENERS	**C**												**C**	**C**	
PC 37: WATER TREATMENT CHEMICALS	F, I												I	I	
PC 2: ADSORBENTS				I, **P**									I, **P**, **C**	F	
PC 11: EXPLOSIVES	**P**														
PC 12: FERTILISERS	F, I, **P**, **C**,			I, **P**, **C**									**P**, **C**		
PC 27: PLANT PROTECTION PRODUCTS	**C**,												**P**, **C**		F
PC 4: ANTI-FREEZE AND DE-ICING PRODUCTS	I, **P**, **C**			I, **P**									I, **P**, **C**		
PC 35: WASHING AND CLEANING PRODUCTS	F, I, **P**, **C**			**P**, **C**									F, I, **P**, **C**,	F, I, **P C**,	

PC 8: BIOCIDAL PRODUCTS (E.G. DISINFECTANTS, PEST CONTROL)	I, P, C,3)			I, P, C								I, P, C	I, P, C	
PC 28: PERFUMES, FRAGRANCES	F, P, C			I, P, C								I, P, C	C	
PC 3: AIR CARE PRODUCTS	I, P, C			P, C								P, C	C	
PC 39: COSMETICS, PERSONAL CARE PRODUCTS	F, I, P, C		F, C	I, P, C		F, P, C	F, P, C	F, P, C	F, P, C	F, P, C	F, P, C	F, C	F, I, P, C	P, C	F
PC 29: PHARMACEUTICALS	I, P												I, P	I, P	
PC 31: POLISHES AND WAX BLENDS	I, P, C			P									P, C	P, C	
PC 15: NON-METAL-SURFACE TREATMENT PRODUCTS															
PC 24: LUBRICANTS, GREASES, RELEASE PRODUCTS	F, I, P, C			I, P									I, P, C	F, I	
PC 25: METAL WORKING FLUIDS	I, C												I	I	
PC 16: HEAT TRANSFER FLUIDS				I, P									I, P, C		
PC 17: HYDRAULIC FLUIDS	I, P, C			I, P									I, P, C		
PC 13: FUELS	F, I, P, C,			I, P									I, P, C		
PC 32: POLYMER PREPARATIONS AND COMPOUNDS	F, I, P													F, I, P	
PC 1: ADHESIVES, SEALANTS	I, P, C,			I, P									I, P, C	I, C	
PC 9C: FINGER PAINT	C			I, P									I, P, C	C	
PC 9B: FILLERS, PUTTIES, PLASTERS, MODELLING CLAY	I, P, C			I, P									I, P, C	I, C	
PC 9A: COATINGS AND PAINTS, THINNERS, PAINT REMOVES	F, I, P, C			I, P									I, P, C	F, I, P, C	
PC 18: INK AND TONERS	F, I, P, C			I, P									I, P, C	F, I, P	
PC 26: PAPER AND BOARD TREATMENT PRODUCTS															
PC 34: TEXTILE DYES, AND IMPREGNATING PRODUCTS														F, I	
PC 23: LEATHER TREATMENT PRODUCTS	P, C												P, C	F, P, C	

PC 14: METAL SURFACE TREATMENT PRODUCTS	I											I, **P**, **C**	I		
PC 21: LABORATORY CHEMICALS	F, I, **P**											F, I, **P**	F, I, **P**	F, I, **P**	
PC 19: INTERMEDIATE	F, I													**P**	
PC 40: EXTRACTION AGENTS															
PC41: OIL AND GAS EXPLORATION OR PRODUCTION PRODUCTS															
PC42: ELECTROLYTES FOR BATTERIES													**P**, **C**		

F: formulation, I: industrial use, P: professional use, C: consumer use, A: article service life; P, C and A are highlighted in red to indicate widespread use with potential for exposure/release

Annex 3: Overview of completed or ongoing regulatory risk management activities

Data extracted on [03/05/2023]

There are no relevant completed or ongoing regulatory risk management activities for any of the other substances.